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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/809,589 | 03/25/2004 | Thomas R. Forrer JR. | AUS920031078US1 | 7122 |

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| EXAMINER | |
|---|---|
| GU, SHAWN X | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2189 | |

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/809,589 | FORRER ET AL. | |
| | Examiner | Art Unit | |
| | Shawn Gu | 2189 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

1. Claims 3-5, 7, 10-12, 14 and 17-19 are objected to because of the following informalities:

Per claims 3-5, 7, 10-12, 14 and 17-10, the acronym "RAID" should be spelled out as "Redundant Arrays of Inexpensive Disks" or "Redundant Arrays of Independent Disks", as these are the claims in which the acronym is mentioned for the first time.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 15-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is a computer program product, which by itself is non-statutory subject matter. Furthermore, the computer-readable medium that stores the computer program product is not an tangible subject matter as disclosed by the specification (see Page 16, first paragraph), which states that some of the embodiments of the medium are transmission-type media, such as wired or wireless communication links. In order for the claimed invention in claims 15-20 of the

instant application to be statutory, it must be a tangible computer readable medium such as a hard disk drive or RAM.

All dependent claims are rejected as having the same deficiencies as the claims they depend from. Appropriate correction is required.

***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims of 1-5, 7-9 and 16-20 U.S. Patent Application 10743310 (hereinafter "'310") contain every element of claims 1-3, 6, 7, 8-10, 13, 14, 15-17 and 20 of the instant application and as such provisionally anticipate claims 1-3, 6, 7, 8-10, 13, 14, 15-17 and 20 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

6. Claims 1-5, 7-9 and 16-20 of '310 clearly anticipates claims 1-3, 6, 7, 8-10, 13, 14, 15-17 and 20 of the instant application, as both groups of claims describe using a RAID controller and a mode selection signal to control the writing of a same set of data to two different locations on a same hard drive using two separate heads.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 4, 5, 11, 12, 18 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7-9 and 16-20 of copending Application No. 10743310 (hereinafter "'310") in view of Jun [US 2004/0179386 A1] (hereinafter "Jun"), which is the Pre-grant Publication of '310.

8. Although claims 1-5, 7-9 and 16-20 of '310 do not state that the receipt of a RAID Page includes a RAID 1 or RAID 3 mode selection, Jun teaches implementing RAID 1 and RAID 3 methods in '310's RAID system to provide data backup and fault-tolerance (see Jun, Pg. 1, Para. [0009]). Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the Applicant's invention that the mode select signal of the RAID system claimed by '310's claims 1-5, 7-9 and 16-20 can include RAID 1 and RAID 3 mode selection to utilize its RAID 1 and RAID 3 implementations, in order to provide data backup and fault-tolerance.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-3, 6, 7, 8-10, 13, 14, 15-17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Jun [US 2004/0179386 A1].

Per claims 1, 8 and 15, Jun teaches a method for redundant data storage (see Abstract) on an individual hard drive (Hard Disk Drive 200, see Fig. 2 and Pg. 2, Para. [0028]), comprising the steps of:

defining at least two data storage segments on said individual hard drive ("WRT_POSITION" and "BCK_POSITION", see Fig. 2 and Pg. 2, Para. [0029]; "upper and lower portions of one disk-shaped medium", see Pg. 3, Para. [0032] and [0042]; Claims 1-5, 7-9, 16 and 20);

associating a first read/write head with a first data storage segment of said at least two data storage segments (Primary Head 230 and Backup Head 270, see Fig. 2, Fig. 3; Pg. 2, Para. [0028]-[0029]; Claims 1-5, 7-9, 16 and 20);

associating a second read/write head with a second data storage segment of said at least two data storage segments (Primary Head 230 and Backup Head 270, see Fig. 2, Fig. 3; Pg. 2, Para. [0028]-[0029]; Claims 1-5, 7-9, 16 and 20); and

responsive to a write operation for storing a predefined set of data on said individual hard drive, storing said predefined set of data on said first data storage segment with said first read/write head, and storing said predefined set of data on said second data storage segment with said second read/write head (Pg. 2, Para. [0029]; Pg. 3, Para. [0038] and [0042]; Claims 1-5, 7-9, 16 and 20).

It is also clear Jun teaches the system of claim 8 as demonstrated by the above description, and claim 15's computer program product on a computer-readable medium (see Pg. 5, Para. [0054] and Claim 16).

Per claims 2, 9 and 16, Jun further teaches the defining and associating steps are performed responsive to receipt of a mode select command including a mode operating selection (Mode_Select, see Fig. 2; Fig. 4, S40; Pg. 2, Para. [0031]; Pg. 3, Para. [0036]; Claims 1, 8 and 17).

Per claims 3, 10 and 17, Jun further teaches the defining and associating steps are performed by said individual hard drive responsive to receipt of a RAID Page (RAID mode, see Fig. 4, S42; Pg. 2, Para. [0031]; Pg. 3, Para. [0040]; Claims 1 and 17).

Per claims 6, 13 and 20, Jun further teaches the defining and associating steps are performed by a controller associated with said individual hard drive (see Claims 1, 17; Fig. 2, Controller 250; Pg. 2, Para. [0029]-[0031]).

Per claims 7 and 14, Jun further teaches the defining and associating steps are performed by a RAID controller associated with said individual hard drive (see Fig. 2, Controller 250; Pg. 1, Para. [0009]; Pg. 2, Para. [0029]-[0031]; Claims 1, 17;).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 4, 5, 11, 12, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun [US 2004/0179386 A1].

Per claims 4, 5, 11, 12, 18 and 19, although Jun do not specifically teach that the receipt of a RAID Page includes a RAID 1 or RAID 3 mode selection, the reference does teach implementing RAID 1 and RAID 3 methods in Jun's RAID system to provide data backup and fault-tolerance (see Jun, Pg. 1, Para. [0009]). Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the Applicant's invention that the mode select signal of the RAID system taught by Jun can include RAID 1 and RAID 3 mode selection to utilize its RAID 1 and RAID 3 implementations, in order to provide data backup and fault-tolerance.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Gu whose telephone number is (571) 272-0703. The examiner can normally be reached on 9am-5pm, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shawn Gu

Shawn X Gu
Patent Examiner
Art Unit 2189

Reginald G. Bragdon

REGINALD G. BRAGDON
PRIMARY EXAMINER

12 May 2006